## NEW YORK'S VERTICAL TRAVEL

GETTING UP AND DOWN STAIRS A SERIOUS PROBLEM.

Five Years of Time and 1.000,000 Horse-Power of Energy Expended Every Day in This Way-And Only Two Methods Progression, Besides Walking

"What about getting up and down when forty story buildings are as common as ten story buildings are now?" said the man who likes to ask questions for other people to answer.

"Well, it's not such a small problem now," replied the man with the head for figures. "I have been making a few calculations which might surprise you." And then he came back with this:

Could all the stairs ascended and 'de scended daily by residents in the city of New York be grouped into one enormous stair representing the total that stair would be 20,000 miles in height. Great as are the problems of horizontal travel, those of vertical travel are hardly less.

What with stair climbing to and from the subway and the elevated, in the older office buildings, and especially in homes, it is a conservative estimate which figure that 5,000,000 stair trips of one flight each are made in New York daily. Allowing thirty seconds for each trip this means that every day a total of 2,500,000 minutes, equal to 41,666 hours, 1,786 days, or almost five years, is spent by New Yorkers in ascending and descending stairs. In a year the total of the time spent in this way amounts to more than 633,000 days, or almost 1,750 years.

The energy which New Yorkers expend in thus raising themselves in the world amounts to more than 1,000,000 horsepower every day, since a trip up an average flight of stairs in half a minute involves the expenditure of energy roughly equal to one-fifth of a horse-power. This total, could it be applied, would furnish power for all New York's engines.

Five years of stair climbing totalling a rise of more than 20,000 miles and calling forth 1,000,000 horse-power; that is the total not of all New York's daily vertical travel. but simply that which is accomplished without the aid of any labor saving device. People have been going to and fro upon the earth ever since the example was set by a certain well known person, but since they quitted trees as habitations they have been little concerned with getting up and down.

Consequently horizontal travel has re ceived all sorts of study and new appliances, while vertical travel until within a few years has had little attention. Consequently the great majority of New York's population plods up and down stairs in the old way, a means of vertical travel which corresponds to the now despised shank's mare method of progress on the level.

That the solution of the problems of vertical travel is rapidly assuming greater importance cannot be doubted. The saying of precious minutes and energy for business men in all fields is daily becoming more important.

As New York grows upward so does vertical travel expand, and the comparative neglect which this field has received in the past may be chiefly attributed to the fact that the necessity for subways, elevated lines and skyscrapers is a latter day growth. More and more the New Yorker is coming to travel in three dimensions instead of two, as did his forefathers. As a result there is springing up the new profession of elevating engineering.

That there is room for it is shown by New York's stair climbing figures. Horizontal travel has carriages, autos, trolley cars, subways, elevated roads, steam lines moving sidewalks -a long array of mechanical devices for horizontal travel. But for the man who wants to get up or down there are besides stairs, of course, just two helps, elevators and escalators.

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There is nothing, for instance, to correspond to the auto, and if a parallel be sought in the field of vertical travel for the devices of horizontal progression it is generally not to be found. Are the elevator and the escalator going to do the work of reducing New York's present daily climb of 20,000 miles and of taking care of the increase that will come with more scraping skyscrapers or will the airship or something of that sort be called into play with lines of that sort be called into play with lines of travel on various levels and landing stages at various floors? Each of the two existing devices has its

particular sphere of usefulness. In sky-scrapers where the installation of an esca-lator on each floor is not desirable the elevator, or rather battery of elevators, fur-nishes the desired service. At elevated stations, in department stores and generally at terminal points where travel is congested the escalator gives far better results be-cause of its more rapid service.

As compared with an elevator, even one

As compared with an elevator, even one to accommodate lifty persons, it can handle ten times as many passengers. There is no delay similar to that which occurs when an elevator is at another floor or when its doors are being opened or closed.

The latter point is an important one, too, where women are concerned, since observation has proved that they take about the second

tion has proved that they take about two seconds more or almost twice as long as men in getting on or off an elevator. Two seconds less occurring a hundred thousand times or more a day mounts up into quite

a total.

These, then, are the two mechanical means of travel in the third dimension. means of travel in the third dimension, Stairs, of course, are always with us, but that this antiquated means of getting up and down is becoming more and more unpopular is evidenced by the growing demand for apartment houses with elevators and, for example, the agitation now going on for the installation of escalators at the extension of the Brooklyn Bridge terminals.

terminals.
That is the field as it is at present, and it would seem to be up to the elevating engineer to take care of the problems that arise as the New Yorker in his daily life gets further and further away from the He may experiment with balloons, airships, moving ladders or anything else, since the two devices mentioned are practically the only departure from the task of stair climbing.

The only recent experiment of late has been the trial and abandonment of the inclined plane or ramp in one railway sta-tion and proposals for its installation in another. But the ramp is nothing new. another. But the ramp is nothing new, and neither the construction nor the history of this form of vertical travel is such as to make it seem probable that it will offer the desired solution or, indeed, mark any ad-vance in the field which it serves,

It does not move, so that it will work no saving of energy, and on account of its construction it will necessitate the expenditure of nearly two minutes, as compared to the thirty seconds necessary to accomplish the same climb by common stairs. On account of its construction, for its rise will be one foot in ten or eleven, sufficiently steep hill to walk up, too will have to twist about for almost two hundred feet to accomplish the same ver-tical rise which could be attained by stairs in about a tenth of that distance, and as compared with them from a time saving standpoint would take about ninety seconds for the traveller desiring to reach

A minute and a half seems of no great A minute and a half seems of no great consequence, but a hundred thousand of them—twenty-five hundred hours, or 105 days, every day, does make a difference. Yet if a hundred thousand persons should use the ramp each day it will involve just that much extra time. It is the very immensity of this vertical traffic which makes these problems so interesting to New York.

New York.

But the ramp, whatever its qualities, should hardly be taken as an indication of the final solution of the city's problem of the final solution of the city's problem of he final solution of the city's problem of vertical travel. Its adoption would repre-

sent rather a return to primitive conditions. It is probably the great-grandfather of the present form of stairs, whose advent somewhere in the early dawn of civilization may have been bailed as a great improvement over the ramp. There was a ramp in the Tower of Babel too, according to abole.

It is perhaps in its physiological effect that the ramp is most interesting, for anatomists are authority for the state ment that a race of men whose muscles are trained by generations of stair climbing to accustom themselves to its strain will rebel against a new form of exercise—certainly a curious illustration of the physi-

certainty a curious mustration of the physical limitations of the human frame.

Evidently, however, the future will demand something entirely different. A city which spends five years of time and 1,000,000 horse-power every day in its vertical travel by stair or ramp affords such a field for expression of time and average as to make or economy of time and energy as to make active to inventors.

York half a century hence with population of 50,000,000 will hardly be will

ing or able to spend fifty years and 10,000,000 horse-power every day in stair climbing with time and energy so valuable. At that rate in the year 1960 New Yorkers would spend 17,500 years annually getting up and down stairs! Figuring the value of every one's time as worth only 20 cents an hour for 300 eight hour days a year, that would mean an annual sacrifice of nearly \$10,000,000 \$10,000,000.

Just how the new era of vertical travel is to be accomplished is difficult to tell, but with buildings growing higher and the streets more crowded, necessitating the removal above or below them of the trac-tion lines, it is certain that it must come. The first advances will doubtless be by means of such equipment as will save time at the expense of energy, or vice versa— working finally into some solution which will minimize both

The day of wireless telegraphy, two mile a minute autos and a thousand and one other wonders has shown that almost nothing is impossible, and it is no great stretch of the imagination to picture a complete arrangement of moving sidewalks and stairways; individual, independent automobile elevators, air shoes, or something else equally undreamed of now.

But with the total of five years and one million horse-power now expended daily by her citizens in vertical travel, and far greater totals coming, it is certain that New York will have to consider this problem seriously.

#### YACHTING BEGINS THIS WEEK Race to Bermuda and Manhasset Bay Regatta on the Schedule.

This week vachtsmen will start in in earnest. It is not very likely that any of the large yachts built for this season's sport will take part in the races, but they will be tuning up and getting ready for the regattas of the leading clubs, which will begin next week. This week will witness several important races, however. On Wednesday the sailing craft entered in the race to Bermuda will be sent off on their 600 mile journey. The start will be made from off the Brooklyn Yacht Club house on Gravesend Bay at 10 o'clock in the morning. and the fleet of the Brooklyn Yacht Club will get under way at the same time and accompany the racers out by the Hook. On Saturday the power boats will be started on the same journey. This race is being managed by the Motor Boat Club of America and the vachts are to be sent off from Scotland Lightship.

On Saturday the Manbasset Bay Yacht Club will hold its annual regatta on the Sound. There will be races for all classes and the start will be made at noon from off Execution Light, the vachts being sent over the usual club courses. This will really mark the first of the big regattas on the Sound, as the Manhasset Bay Club always has a good entry list. Down the lower bay the Brooklyn Yacht Club will hold its spring regatta for classes M and below, and the yachts will start off the Brooklyn Yacht Club house and sail over the Gravesend Bay courses.

There is keen rivalry among the Brooklyn yachtsmen and particularly in classes Q and S. The Q boats have to meet the new Vingt-trois. The Joy, Spider and Soya have been specially prepared for the season's racing and have been improved as much as their designers think they can be. The Joy has a new rig. It is not as lofty as the one she used last year. Then the long gaff swung outboard very much and hurt the yacht's abilities in turning to windward. The Soya has had her cabin trunk taken off and is now a flush decked yacht, and changes have been made in the Spider. In class S, which is for the Lipton cup boats, several of the new yachts have made their appearance and are being tuned up as fast as possible. It is going to be hot racing all the season with this class, and the owners

of these boats are determined to have all of these boats are determined to have an the fun they can.
On Tuesday, June 11, the Atlantic Yacht Club will hold its annual regatta down the bay. This will be the first of the big events, bay. This will be the first of the big events, and Chairman John R. Brophy has aiready been assured that the Effort, Neola, Istalena, Winsome and Queen will be starters. The Queen, Mr. Maxwell says, will race if the Elmina or the Ingomar is on hand, but otherwise she will not go out. The Elmina is at Greenport, but will probably be ready by that time, and the Ingomar has gone to Bristol to have a centreboard put in. When the Ingomar went abroad two years When the Ingomar went abroad two years When the Ingomar went abroad two years ago the board was taken out as centre-boards are penalized under the British rules and Mr. Plant did not wish to race at a disadvantage. Now that the yacht has to meet the Queen, a new yacht with a board. Ingomar is to be put back to her original trim. Capt. Charles Barr has charge of this yacht and has attended to her fitting out. She will be raced for all she is worth and it is expected that she will have several hard tussles with the Queen.

When the Effort came out last year some criticism was made on her rig, because Designer Gielow had given her a long masthead and short thin topmast. "Why has Designer Gielow had given her a long mast-head and short thin topmast. "Why has she such an ugly masthead and a flagstaff for a topmast?" was asked by one well known yachtsman. Before the season was over it was found out that the yacht's gaff could be kept well inboard and the mainsail kept in better shape because of the lead of her peak halliards. This year the new 57 footers peak halliards. This year the new 57 footers are fitted in the same way as the Effort. Herreshoff has never been known to pass a good thing by, and in this case he has taken a lesson from Gielow. The Effort will in her early races be in charge of Addison G. Hanan and she will be well handled.

The Rephester, vachtagen have been

with the Queen.

son G. Hanan and she will be well handled.

The Rochester yachtsmen have been trying to induce Mr. Hanan to go to Charlotte in August and sail the Seneca, the Canada cup defender, against the yacht selected by the Royal Canadian Yacht Club. Mr. Hanan sailed the Irondequoit to victory some years ago when the Canadians had won two races. The Rochester yachtsmen have this in mind, and as Aemelius Jarvis is sure to sail the challenger they think the cup would be safer if Mr. Hanan met him again. If is very doubtful if he will undertake the job. Mr. Hanan has made plans to put the Aspirant in commission and take part in the races during the cruise of the New York Yacht Club. The Aspirant won an Astor cup a few years The Aspirant won an Astor cup a few years ago and she may repeat that trick again this year.

### He Got All Three.

From the Washington Herald In the late John Sherman's last race for the Presidential nomination Representative W. P. Brownlow of Tennessee was made the manager of the great Ohioan's interests in that State. Sherman was never popular with the Republicans of Tennessee, and Mr. Brownthe Republicans of Tennessee, and Mr. Brownlow, who was not as experienced in the political game then as he is now, had a hard task. He succeeded, however, after strenuous effort, in getting three Sherman men on the delegation, one of whom was himself. After Sherman had been defeated in the convention he met Brownlow and criticised the Tennesseean severely for the poor showing made in his State.

"There were just three Sherman men in the whole State of Tennessee," declared Mr. Brownlow in defence, and I got every one of them on the delegation."

Mr. Sherman had nothing more to say, and he never again permitted his name to be used for the Presidential pomination.

PRIMER FOR AUTOING NOVICES WORKING OF GASOLENE MOTORS

EXPLAINED SIMPLY.

Expert Gives Details of Power Plants in Self-Propolled Vehicles and Advised Inexperienced Operators How to Lo cate Minor Troubles and Remedy Them

With the great increase in the use of automobiles there is always a certain proportion of the motoring recruits who wish to drive their own cars, some from motives of economy and others because they do not like to be entirely dependent on a hired chauffeur. In the majority of cases it is a difficult mat terforthese men to spare the time necessary for them to be thoroughly instructed re garding the mechanism of their cars, and the result is that there are hundreds of men driving their own cars to-day that have no trouble so long as everything works all right, but who are compelled to send for aid the instant any slight disarrangement occurs in the mechanism of their machines. To help this class of motoring novices to understand their cars F. W. Leavitt, president of the Automobile Dealers' Association of San Francisco, has issued a letter of instruction to motoring novices reading as follows:

"The reason why the engine runs is that gasolene vapor is drawn into the cylinder of the engine, compressed by the stroke of the piston, and at the proper time exploded by the action of an electric spark, generated at the battery and intensified by passing through the coil. The force of the explosion drives the piston on its working stroke The momentum of the fly wheel carries the piston back into the cylinder, forcing out the burnt gases. It also carries the piston along on its suction stroke, drawing in a fresh charge of gas, and returns the piston into the cylinder on its compression stroke, when he electric spark again occurs and drives

the piston on its working stroke.

"This is called the four cycle type of gas engine and is the type most generally employed. It must be evident that the machine must have gasolene, that the gasolene must reach the carbureter, that there must be batteries, and the batteries must be properly wired to the coil and the vibrator of the coi must be properly adjusted, so that a spark is delivered at the spark plug. The valves must be working properly to admit the fresh gas from the carbureter and to let

out the burnt gases after the explosion. "Assuming that the valves have been properly set, they will probably remain so but a valve stem might become clogged or gummy, where it works in its guide, the result being that the valve would not seat at the proper time. There would then be no compression and consequently no ex-If a little kerosene is occasionally plosion. I a little Refoserie is occasionally injected into the cylinders above the piston there is little danger of this occurring. The causes that might result in an engine not starting or working properly and the order in which they should be expected are:

"First—Troubles with the ignition system; a wire may become broken or loose, the betteries may be run down the via

the batteries may be run down, the vibrator on the coil may not be properly adjusted or the points of the spark plug may be fouled with burnt oil.

"Second—Trouble with the gasolene

system; there may not be gasolene in the tank, the pipe to the spray nozzle in the oarbureter may be clogged in the pipe or nozzle. The gasolene may have water in it which is not uncommon, or the carbureter may not be properly adjusted to give the right explosive mixture of gasolene and air.
"Third—Trouble with the compression
due to a sticky valve. This can be located by cranking the engine over and if any cylinder shows a lack of compression it would be reasonable to expect that the inle

or exhaust valve might be sticking. or exhaust valve might be stocking.

"Should a machine stop on the road or refuse to start, proceed as follows to locate the cause of stoppage: Look for trouble in the ignition system or a broken wire, by turning the engine over with the starting crank slowly and listen for a buzz from the vibrator of the coil. In a one cylinder machine there should be a buzz every two revolutions of the crankshaft In a two cylinder machine there should be In a two cylinder machine there should be a buzz every revolution. If the coil buzzes it is a sure thing that there are no broken wires. Then look to see if gasolene reaches your carbureter by depressing the priming pin in the carbureter. If gasolene flows out of the carbureter it shows that you are all right at that point.
"Having ascertained that you have elec-

tric current as shown by the coil buzzing, and that you have gasolene at the carbureter, it is only natural then to suppose that the spark is not occurring in the cylinder to explode the gasolene vapor, assuming, to explode the gasolene vapor assuming, of course, that the carbureter is properly adjusted to mix the gasolene with air to give the proper explosive mixture. It is understood, of course, that too much gasolene in the mixture will not explode properly, and the same result if the mixture is too thin. It is then reasonable to suppose that the points of the spark plug are fouled by burned or carboned oil. Screw the spark plug out of the cylinder and wash the spark plug out and cleanse it with gasolene, and scrape the points of the plug to clean them. The points of the plug should be a little less than one-sixteenth of an inch apart. of an inch anart.

"You might test the spark plug by laying it on the cylinder head, and with the switch on crank the engine over slowly and at it on the cylinder head, and with the switch on crank the engine over slowly and at the time the coil buzzes a spark should show at the spark plug points. If the spark plug is not placed on the cylinder or the spark plug wire is not grounded against some part of the engine, the engine should not be turned over and the coil made to buzz, because this might work an injury to the coil. The spark plug wire may, however, be held at a distance not to exceed one-fourth of an inch from the cylinder and the engine turned over to test the spark; at the time the coil buzzes the spark will jump from the end of the spark plug wire to the cylinder or part of the engine nearest it. If this distance between the wire and the engine is much greater than one-fourth inch, as stated, an injury may be worked to the coil.

"During this testing of the spark plug wire it is advisable not to hold the wire in the hand. It had better be propped up against some part of the machine, as the current may pass through the hand and result in adviolent electric shock. Having ascertained that there is gasolene in the converted on the spark plug and

result in adviolent electric shock. Having ascertained that there is gasolene in the cabureter and spark at the spark plug and the carbureter adjustment has not been changed since the engine was properly running, if you will throw on the electric switch and crank the engine over in the usual acceptant there are very few reasons why the and crank the engine over in the usual manner there are very few reasons why the engine should not run. One of them might be a sticky valve, and thereby loss of compression. This, however, is not at all common, but would be detected in cranking over the engine. A single cylinder engine should have a compression every two revolutions, a two cylinder engine a compression every revolution.

"It might be reasonable to suspect water in the gasolene, which may be removed by opening the draining plug or cock in the bottom of the carbureter, which should take the water with it. If there is gasolene in the tank and it does not flow out of the carbureter when the priming pin is depressed

carbureter when the priming pin is depressed it must be evident that the carbureter or the pipe leading to it is clogged. This can be easily cleaned. The adjustment of the vibrator or vibrators of the coil may be tested by throwing on the electric switch and taking a piece of wire, holding one end against some metal part of the machine, say the steering post or one of the foot pedals, and press the other end of the wire against one of the binding posts on top of the coil units in the coil box. The vibrator can be adjusted by screwing up or down parbureter when the priming pin is depressed can be adjusted by screwing up or down on the vibrator adjusting screws till the vibrator has a good healthy buzz. Then by turning the engine over there should be a buzz at the coil for every compression in the cylinder or cylinders. If there is not there is trouble at the commutator.

not there is trouble at the commutator.

"Having found by examination that the gasolene reaches the carbureter, and assuming that the carbureter has been properly adjusted, that the coil buzzes and that the spark plug is good and clean, and by being tested on a cylinder head gives a

spark, and that the compression is all right, that engine must run. Assuming that the engine generates the power, it is then necessary to transmit the power to the wheels through the transmission system. In the Reo car, with its planetary transmission, there is a low speed and a high speed forward and a reverse speed, and it must be evident that if the application of the levers for the speeds does not give the result, but the engine continues to turn, the clutch, either high, low or reverse, should be tightened. This is but the work of a few minutes, and it is supposed that the operator is acand it is supposed that the operator is ac-quainted with the method of accomplish-ing this result. If he is not, he surely

"The old saying that 'oil is cheaper than machinery' is very true in the case of ar automobile, and if the owners of cars will automobile, and if the owners of cars will only remember this saying, and oil, oil, oil, they will be rewarded by better running and more powerful machines. Every moving part, such as the ends of the springs and the spring hangers and all the pins and working parts of the steering gear and the brakes and the axles, particularly the bearings of the rear axle, should receive oil. The transmission case should receive about half a pint of oil at least about once a week, and least and most important, the a week, and last and most important, the engine bearings and the crank ca be liberally supplied with oil. transmission a heavy oil may be used but in the engine and other parts of the car a good light gasolene engine oil should

"It is a very desirable plan if the engine is used considerably to inject daily into the crank case through the filling plug in the top about half a pint of gas engine oil, enough to cause the exhaust to have a little bluish color, and it is a good plan to see that about type a week your plan to see that about twice a week engine has enough oil so that the exhaust is of a bluish hazy color, not necessarily smokey, but just enough to indicate that the engine is getting plenty of oil. Black smoke from the exhaust indicates too much gasolene in the mixture." gasolene in the mixture.

SPECTACLES MODERN INVENTION Glass Made by Ancients Not Perfectly Transpapent.

From the Chicago Tribune Did Nero wear spectacles? Pliny relates that the Emperor Nero used a precious stone through which he gazed on the gladiatorial combats. Dr. Magnus, the latest authority to examine the passage critically, holds that this means that the emperor was in the habit of gazing upon an emerald which he used to carry with him for the purpose of resting his eyes when they became tired of looking at the shows.

This view is corroborated by the belief of antiquity that green has a restful effect upon the eyes. Contrivances for bringing the rays of the sun to a focus in order to produce combustion have been employed glasses were used to kindle fires and these nust have been of considerable size even in a country like Greece, where the sun shines hot most of the year. Moreover, we are told they were kept in chemists' shops for the

Though the art of making glass of certain kinds is old, spectacles had to wait the dis-covery or invention of some method that would produce it perfectly transparent. Specimens of glass have been found in Egyptian tombs more than 4,000 years old, and glass bottles are represented on tombs at 1,500 years earlier. In Mesopotamia the art of making glass has been traced for at least 2,000 years B. C.

But all the glass of antiquity was of inferior quality and was almost useless for ourposes where the rays of light were to be transmitted unbroken and with undiminished

Mirrors also were made in Egypt thousands of years before the Christian era

#### THE NATURE STORY COMPETITION Remarkable Sagacity of the Grebe, Colym-

bus Minor-Her Floating Nest. From the New Orleans Times-Democrat "The mother bird sat on her eggs at the water's edge, and when I approached she pushed off with her foot as though the nest had been a boat, and away she floated calmly

down the stream." "What you saw was a rare spectacle." said the nature student. "The bird was a grebe, the colymbus minor. She always builds on the water's edge, and her nest is always woven of aquatic plants so closely and firmly that it will float herself and her

eggs without leaking. On the approach of danger the bird pushes off. Nor is she at the current's mercy during her voyage. She uses her foot as a paddle, and I have seen her steer her boat nest with some little dexterity around a bend, landing in a quiet cove as well, say, as the average

### Cat's Tenacity of Life.

From the London Standard. An instance of the remarkable vitality pos essed by the cat has just been demonstrated it Herbling, near Billingborrough. A very fine crossbred Persian mysteriously disappeared from its home, and sixteen days later was found in an open field firmly secured in a rabbit trap.

Not withstanding the animal's long and painful confinement and exposure to the heavy rains it was still alive. It was, however, re duced to a mere skeleten, and was unable to walk, but under proper treatment it is now recovering. That the cat had been in the trap all the time is beyond question, as otherwise t would have returned home to a kitten which was suckling at the date of its disappear

#### Bay Bear Hunter From the Milwaukee Sentinel.

"There is a boy in the northern part of th State, J. B. Higgins, aged 15 years, who rivals President Roosevelt as a destroyer of bears, said Hugh Regan of Chicago. "On a recen said Hugh Regan of Chicago. "On a recent day the boy left the house with his dog to look up a bunch of cows that had wandered far away from the farmhouse. Before the young man and his dog had gone a great distance the boy heard a strange noise. The dog grew excited and presently it rushed on to thre bears that had taken refuge in a low tree. "The young man had little trouble in bring

ing them down. The largest of the bears measured five feet from the end of the nosto the end of the tail."

### Travelling Incubator.

Vineland correspondence Philadelphia Record W. E. Langshaw performed a feat which it is believed has never been equalled. Hav ing to move from Rosemont, Pa., to this place, he decided to try to save twenty-six imported eggs in his incubator by bringing them along. He lined a basket with paper and, placing the eggs carefully between warmed woollen blankets, started for his nev home, over fifty miles away. On account of the slow trolleys in Philadelphia Langley was forced to lay over four

and one-half hours in Camden for a train Arriving here, he opened the basket to find twenty-five lively little chicks, which are now as spry as any that were ever hatched

### F. T. Bullen in London Spectator

A tabby tomcat which I have reared from kitten and which is now nearly three years old possesses more amicable characteristic and paradoxical peculiarities than I have ever known a cat to have before, and I loved cats all my life. He bathes like a seal, have ing taught himself in a sponge bath when about three months old, and thoroughly enjoys a romp with my big Labrador do

afterward to get dry.

He is a perfect demon for fiedgling birds walking all over the front of the lvy clad house and hooking them from their nests, very often pouching fourteen a day. Yet he lies in the dining room where a goldfinch a siskin and a linnet fly backward and for ward continuously, often brushing close past his head, and of them he never takes the

slightest notice As I write he is mothering a belated chick which was extracted from its shell by our selves this morning, the hen having left the nest with twelve others. It is snuggling be tween the cat's hind legs and peeping out between them most comically. I must add that this cat has never been beaten or trained in any way except by a quiet word.

OUR NEW JERSEY SUBURBS

IN THE FARMING COUNTRY OF THE HACKENSACK VALLEY.

The Suburban Territory Through Which the New Jersey and New York R. R. Runs Has Kept Much of Its Old Time Rural Beauty-A River Without Factories.

The New Jersey and New York Railroad ollows the valley of the Hackensack River through New Jersey and across the State line into Rockland county, its branche extending far up behind Nyack and Rockland Lake and the hills surrounding Haverstraw. Throughout almost its entire length the railroad traverses a region of wooded hills and rolling farm land. The station are, with one or two exceptions, small country villages with the quaint rural features which one expects to find only at a considerable distance from the city.

Clustering around the crossroads stopping places are a few general stores, an occasional real estate office and the postmaster's quarters. Trees almost hide the scattered houses from view and the spacious plots of grass in the main squares present an odd mixture of village and country features. A short distance from the tracks flows the Hackensack River, a picturesque, winding stream whose clear placid waters supply an ideal resort for the canoelst or angler. Boat clubs are numerous in Hackensack and the smaller towns, and nearly every summer home along the banks of the river has its landing place and at least one cance. The stream flows narrow and deep between steep banks shaded by overhanging elms and buttonwoods. In the long quiet reaches above Hackensack one may paddle for twenty-five or thirty miles before shallow water is reached.

The country bordering the Hackensack River presents the unusual appearance of a region possessing good transit facilities and yet retaining almost unimpaired its original rural simplicity. The great out of town movement of New York's 'ncreasing population has thus far followed other channels, and the Hackensack Valley has not been affected to any great extent. Its growth has been slow and steady, the result being the parcelling out of land in small individual holdings. Small country homes surrounded by good sized grounds and with a sufficient number of large trees to comfortably shade them from the summer heat are the rule. Development companies have not been able to obtain land here in single tracts large enough to make their operations profitable. Very few big estates have been established along the river, as the general preference of rich land owners is for the higher and more rugged mountains of the interior or the broad sweep of the ocean front along the lower New Jersey coast.

After the long run across the meadows the New Jersey and New York Railroad branches off from the main line of the Erie near Rutherford and turns northward, following the base of the eastern slope of a high ridge. Carlstadt, Woodridge and Hasbrouck Heights, the first stops, are simply extensions of the town of Rutherford. The same features which distinguish the parent city are found in the smaller settle-The ground is of considerable menta height, sloping steeply to the Passaic River on one side and the Hackensack meadow on the other, thus insuring good drainage. City conveniences have been installed in the towns. The streets are symmetrically laid out and the houses are well constructed. The most valuable feature of the towns is their ease of access from the city, the time from Chambers street being only about thirty-five minutes. Commuters make up a large part of the population. Two trolley lines furnish direct communication with

Commutation tickets are good on both roads between New York and any one of the five stations maintained within the town limits. The business section of the town lies along the banks of the Hackensack in the vicinity of the railroad stations and the interesecting trolley lines. The residential district has pread out to the north and west on the slope of a high ridge which rises gradually frethe waterfront. The town has been be out on a generous scale with ample space between buildings and an abundance of shade trees and grassy squares. This lib-eral allowance of space creates an impres-sion that belies the real size and importance

eral allowance of space creates an impression that belies the real size and importance of Hackensack. A stranger would not suspect from first appearance that the town contained over 10,000 inhabitants.

The place has many interesting historical associations which date back to its occupancy by the Dutch colonists. Facing a public square, shaded by ancient elms and cottonwoods and fronting on the main street, are two quaint relies, the Mansien House, at one time the temporary head-quarters of George Washington, and the old Dutch Church. Hemming in the quiet square on all sides is the thriving business district, modern in every particular. Fine schools and churches, public buildings and clubs of every description are to be found here, while all the indispensable features of city life have been provided. A fast electric road runs from the 125th street ferry to Bogota, crosses a bridge over the river and connects at Hackensack with the trolley running northward with the trolley running northward

Fairmount A short distance above Hackensackthe A short distance above hackensack the railroad draws nearer to the river and frequent views of its winding course are obtained from the car window. The stream flows between grassy banks which rise gently to a considerable altitude on the west. Cherry Hill, now known as North Hackensack, River Edge and New Milford, all with stations on the railroad are greatly

Hackensack, River Edge and New Milford all with stations on the railroad, are small towns inhabited almost entirely by commuters. They have no business section to speak of, the greater part of the town marketing being done in Hackensack.

New Milford is the head of sloop navigation on the Hackensack River. Above this point the stream is not affected by the rising and falling of tides. The water has been appropriated to supply the towns of Oradell, New Milford, Hackensack and intermediate towns as far south as Hoboken and is carefully guarded from pollution. and is carefully guarded from pollution. The million dollar plant of the Hackensack Water Company is located here, surrounded

Water Company is located here, surrounded on all sides by a loop of the river.
Oradell, a modern commuting settlement, claims with no little justification to be one of the garden spots of Bergen county The river has been dammed to form an extensive lake bordered with steep grassy banks and tall trees. A hill to the west of the religions of the religion of the reli the railroad tracks rises to a considerable elevation and commands a magnificent view over the western slope of the Palisades across the Hackensack Valley.

Beyond Oradell the river makes a sharp turn to the right, entering a region of thick woodland, while the railroad continues its northward direction. Stops/are made at Etna, Westwood, Hillsdale Manor, Hills-dale, Woodeliff, Park Ridge and Montvale. All are small country villages with a large percentage of commuters. Westwood is the most important. It has a fine high the most important. It has a fine high school, several churches, modern improvements in the way of electric light, gas and water supply, enterprising local merchants and a strong board of trade. Good macadamized roads radiate in all directions, leading to Nyack, Ridgewood, Paterson, Newark and New York, Its well built houses, each occupying a plot of at least 50x150 feet, give an appearance of neatness and prosperity. Westwood is at present undergoing a considerable boom due to the operations of several big land companies which have obtained holdings there. The other villages along the line, al-

COMPARE ATY

Statios. Sofarete Manhatten
Close to Old City Line, south
of and adjoining Woodhaven,
June, of Liberty ave., Rockeway road and Woodhaven
ve. Two 'L' lines (Lings)
Os. & Broadway) to City Line
was. Two lines L. I. RR. to
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vark stations. Two Trolleys
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though of small size, are maintaining a steady growth. The natural attractive-ness of the region and its healthfulness are becoming more widely known, and the number of permanent commuters is rapidly noreasing. The railroad follows a course number of permanent commuters is rapidly increasing. The railroad follows a course midway up the slope of a ridge, with high rolling hills on each side. To the west, on the further slope of the hills, lies the beautiful Saddle River Valley, while to the eastward the Hackensack River winds through the fertile meadows of Riverdale.

sack, while connection can be made by trolley with Jersey City and the Fort Lee ferry.

Hackensack is the largest and most accessible town in the region. It is served both by the New Jersey and New York Railroad and by the New York, Susquehanna and Western, also under the control of the Frie River, one of the largest towns in the vicinity. It is a distributing centre of considerable importance and includes within its limits a big machine shop, the nly factory of any size along this division

of the road Nanuet, the next station above Pearl River, is an important railroad centre. The New Jersey and New York Railroad turns westward at this point and runs as far as String Valley, where it resumes its northward course to Haverstraw. The Piermont branch, connecting Suffern on the west with Sparkill on the east, runs through Nanuet and String Valley, while the New City branch runs from Nanuet northward to New City. Notwithstanding its many railroad connections Nanuet is still a small country village situated in the midst of a farming territory. Roundabout are the country homes of many retired business men and the estates of a number

Spring Valley, about two miles to the northwest of Nanuet, is the terminus of the northwest of Nanuet, is the terminus of the suburban service on the New Jersey and New York railroad. Tha town lies in a valley intersected by numerous brooks and streams. High hills rise on every side. In the village itself, which is considerably larger than the other settlements near by, a business district of some importance has stream up. A number of stores and local grown up. A number of stores and local markets have been established recently and the town is expanding rapidly. Many small frame houses, costing very little to build, frame houses, costing very little to build, are being erected. Local building and loan associations are taking a leading part in the movement.

The New City branch, connecting Nanuet The New City branch, connecting Nanuet with Bardonia, Germonds and New City, runs through a picturesque region of farms and orchards. The first two stops are merely crossroads stations for the benefit of the farmers and a scant number of commuters. New City, however, is a village of considerable importance. The county court house and the row of shops along the main street present an enterprising appearance. The town is charmingly situated on a high ridge, commanding a view over miles ance. The town is charmingly situated on a high ridge, commanding a view over miles of the surrounding country. An unusual feature of the place is the wide outlook which may be obtained from the railroad station. The first thing that catches the eye of a stranger alighting from the train is the broad valley spread out before him, with the steep mountains along the Hudson River rising in the distance.

At the summit of the ridge one may see spread out before him the wide valley through which flow the head waters of the Hackensack, and beyond them Hook Moun-

Hackensack, and beyond them Hook Mountain and the wooded slope of the peaks surrounding Rockland Lake and Nyack.

All through the picturesque region along the lower border of Rockland county and the Hackensack Valley are small farms which may be picked up at reasonable

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